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TRUCK-CROP INSECT INVESTIGATIONS

J. E. Graf, Senior Entomologist, in Charge

W. H. White, of Washington, D. C., visited Chadbourn, N. C., on October 14 and 15, to confer with W. A. Thomas regarding the problem of the strawberry root aphis.

At a meeting of Orange County, Calif., pepper growers, called to discuss the very serious damage by the pepper weevil, talks were given by J. C. Elmore and R. E. Campbell, of the Alhambra, Calif., laboratory.

At the Los Angeles County Truck Crop Growers Institute, held on October 25 and 26, R. E. Campbell discussed truck-crop pests and their control. On October 27, before the Imperial County Truck Growers Association, he talked on lettuce insects, cantaloupe insects, and the pea aphis.

F. S. Chamberlin returned to Quincy, Fla., Oct. 24, from Tampa, where he had assisted S. E. Crumb with experiments on vacuum fumigation for the control of the cigarette beetle.

S. E. Crumb, after finishing his experiments at Tampa for the control of the cigarette beetle, returned to his official station at Clarksville, Tenn., on October 25.

J. E. Dudley, Jr., Madison, Wis., attended the Wisconsin Canners' Conference at Milwaukee on October 27.

The temporary appointments of M. W. Stone (Toppenish, Wash.) and I. W. Berryhill (Foley, Ala.) have been terminated. It is understood that these men have accepted temporary appointments with the Federal Horticultural Board to work in Texas on the pink boll worm.

The temporary appointment of G. A. Orum (Foley, Ala.) has been extended in order that investigations under way in which he is concerned might be continued.

T. E. Bronson (Madison, Wis.) and O. E. Gahm (Columbus, Ohio) have resigned to return to school.

The temporary appointment of V. E. Romney (Twin Falls, Idaho) has been terminated.

FOREST INSECT INVESTIGATIONS

F. C. Craighead, Senior Entomologist, in Charge

J. C. Evenden reports that in the past season control operations were instituted against an epidemic of Dendroctonus monticolae in the lodgepole pine stand of the Bitterroot and Beaverhead National Forests. This outbreak, which began some four or five years ago, has at the present time reached a tremendous magnitude; on the East Fork of the Bitterroot River hundreds of thousands of lodgepole pine and yellow pine trees are killed each year. Within the past two or three years the insects have crossed the Continental Divide from this area and established themselves in the Beaverhead National Forest, where the infestation, unless checked by artificial control, promises to become as serious as that on the Bitterroot Forest, where entire lodgepole pine forests are being destroyed.

Approximately $17,000 was spent in control work on this project during the past season. The amount was sufficient for a fairly efficient clean-up on the Beaverhead Forest, but permitted the treatment of only the extremely advanced groups of infested trees of the Bitterroot Forest. During August and September an extensive survey was made of the infested areas by Mr. Evenden, the Bureau's representative in charge of this project, preliminary to the institution of control work in the spring of 1927. This survey showed that in the past season the insects had spread into the areas cleaned by control work in May and June, in such numbers that if these regions are to be held against the advance of the epidemic there will be more trees to treat in 1927 than there were in 1926.

During the past summer A. L. Gibson, of the Coeur d'Alene, Idaho, Station, has been located in temporary field headquarters at Sula, Mont., continuing the intensive studies of Dendroctonus monticolae which were instituted in 1925. The earlier part of the season was spent in checking the results of the control experiments established in the previous season. These experiments consisted in felling the infested trees and removing the limbs and tops, felling them and leaving the limbs and tops remaining, felling them so that the bole was flat on the ground, on logs, and lodged in other trees, and girdling standing infested trees. The experiments were arranged with a view to securing different degrees of moisture between the bark and the wood, in the hope that by some of the methods tried the insect broods would be destroyed. An intensive examination was made of these trees, and valuable data were obtained relative to the seasonal history and habits of Dendroctonus monticolae, as well as of associated insects, predators, and parasites. These experiments produced no positive results, but the more promising phases were continued on a rather large scale in the latter part of the season. It is hoped that from a combination of two of these phases a satisfactory mortality of the Dendroctonus broods will be obtained; one which will warrant the use of the method as more economical than others which have been tried in controlling Dendroctonus epidemics in lodgepole pine stands.

The field season has practically come to a close, and Dr. S. A. Graham and L. G. Baumhofer have returned to their station at St. Paul, Minn., for the winter.

L. W. Orr and Gerald Horton, temporary field assistants, have resigned their positions to resume studies at the University of Minnesota. Mr. Orr was engaged in spruce budworm investigations in northern Minnesota during the season just passed, and Mr. Horton worked with Mr. Baumhofer, at first on the pine tip moth in Nebraska, and later on sample plots in Itasca Park.

R. A. St. George returned to Asheville, N. C., on October 3, to assist J. A. Beal in bringing to a close for this season some of the projects relating to a study of the southern pine beetle, and also to continue certain seasonal cutting and fire studies relating to the pine beetle work. Because of continued warm days the barkbeetles and borers were found to be still active on October 16, when Mr. St. George returned to East Falls Church, Va. Several small outbreaks of Dendroctonus frontalis occurred in the summer and early fall, and afforded an opportunity to obtain many records which will be of value to this office.

Correspondents of Dr. T. E. Snyder report that the city of Honolulu, Hawaii, has just adopted a revised building code laying particular stress on suggestions that will prevent damage to buildings by termites. In Honolulu termites annually inflict on buildings damage amounting to about a million dollars. There is every reason to believe that the entire west coast of the United States will adopt a similarly revised building code. In New Orleans, La., 80 per cent of the frame buildings are infested with termites, and it is believed that a revised code will be adopted there. In Pasadena, Calif., 50 per cent of the business buildings are infested, some of them being in dangerous condition.

Other localities of the Southwest, Central West, and Southeast are similarly affected, and our goal is to have standard codes for these sections of the country. The city of Washington has a large number of buildings which are severely infested, some of them being badly damaged. We now believe that a modified building code is the most economical and practical method of preventing such damage.

JAPANESE BEETLE INVESTIGATIONS

Loren B. Smith, Entomologist, in Charge

E. Avery Richmond, of the Laboratory force, attended a meeting of the Connecticut entomologists held at Storrs, Conn., October 29, where he addressed the gathering on the subject of the Japanese beetle.

J. P. Johnson, formerly stationed at the Japanese Beetle Laboratory, and now connected with the Connecticut Experiment Station, visited the local station this week and conferred with L. B. Smith concerning the control of the Asiatic beetle.

CEREAL AND FORAGE INSECT INVESTIGATIONS

W. H. Larrimer, Senior Entomologist, in Charge

W. A. Baker, of the Dallas, Tex., substation, was transferred on October 1 to the corn-borer investigations at Arlington, Mass.

R. A. Blanchard, formerly of the Webster Groves, Mo., laboratory, has been appointed Assistant Entomologist, pending certification, and assigned to the Monroe, Mich., corn-borer laboratory.

On October 21 a large delegation of farmers, county agricultural advisers, and officials of the Michigan State College inspected the corn-borer work in progress at the Monroe, Mich., laboratory. Special groups from various counties in the State visited the laboratory in September and October. Dr. Luginbill, in charge, has given a number of lectures on the corn borer to high schools in southeastern Michigan and to the Lenawee County Grange.

During September and October the liberations of introduced parasites Exeristes roborator and Habrobracon brevicornis were continued in Ohio, Michigan, and Indiana. These parasites were reared at the Monroe laboratory.

L. H. Patch, of the Sandusky, Ohio, corn-borer laboratory, reports that the annual field survey on 179 cornfields, representing the older portion of the infested area of Ohio, showed an average increase of infestation slightly exceeding 400 per cent, as compared with a similar survey in the same or near-by fields in 1925. Similar results are anticipated for the annual comparative surveys in western New York and southeastern Michigan, when these surveys are completed.

In September and early October a series of field meetings and demonstrations were conducted in western New York, in which H. N. Bartley, of the Silver Creek, N. Y., corn-borer laboratory, cooperated with Assistant Commissioner C. P. Norgord of the N. Y. Conservation Commission. These meetings were attended by large groups of farmers and county agents, as well as by representatives of large canning companies and manufacturers of farm machinery. The new low-cutting attachments for two types of corn binders were demonstrated.

H. N. Bartley, of the Silver Creek, N. Y., corn-borer laboratory, reports an average infestation by the corn borer of 24.8 per cent of the ears of sweet corn delivered to three canning factories at Irving, Forestville, and Silver Creek, N. Y., during the season of 1926.

Beginning in mid-October, foreign importations of parasite material from the parasite laboratory at Hyères, France, have been received at the Arlington, Mass., laboratory. These importations will continue throughout the autumn and winter. The material will be held for liberation and breeding work in the Spring of 1927.

P. J. Chapman, Acting Extension Entomologist, Ithaca, N. Y., L. R. Simons, of the Central Farm Bureau, Ithaca, and Dr. E. P. Felt, State Entomologist of New York, Albany, visited the Silver Creek, N. Y., corn-borer laboratory on October 5.

L. H. Worthley was in Washington on October 22 and 23 for consultation with Bureau officials.

In the latter part of October Stewart Lockwood, of the Billings, Mont., laboratory, spent a couple of weeks in Washington, for consultation and library work in connection with grasshopper manuscripts.

V. L. Wildermuth, of the Tempe, Ariz., laboratory, made a ten days' trip early in October to points in southwestern Arizona and southern California, in connection with work on the Chalcis fly. While on this trip he was able to make a brief call on Mr. Campbell, of the Alhambra, Calif., laboratory.

COTTON INSECT INVESTIGATIONS

INVESTIGATIONS OF INSECTS AFFECTING THE HEALTH OF MAN AND DOMESTIC ANIMALS

J. L. Webb, Associate Entomologist, Acting in Charge

F. C. Bishopp and B. R. Coad were in Washington several days early in October for conference with Bureau officials.

On October 1 H. E. Wallace was transferred from the Division of Miscellaneous Insect Investigations and assigned to work on the cotton flea hopper.

R. W. Moreland, G. L. Smith, and G. L. Garrison have been transferred from Tallulah, La., to Tucson, Ariz., and assigned to work on the Arizona weevil.

W. E. Dove, who has been connected with the Bureau's work on insects affecting livestock, and was recently assigned to work in Florida, pursuing studies of creeping eruption of man, resigned from the Bureau on October 13 to take up graduate studies at Johns Hopkins University.

Dr. R. C. Roark, of the Bureau of Chemistry, returned to Texas about the middle of October to continue cooperative investigations of the chemotropic responses of the screw-worm fly and related insects. The major part of his time while in Texas this fall will be spent at the Uvalde laboratory, working with D. C. Parman.

The appointment of Roy Melvin, a temporary field assistant at Tallulah, La., terminated October 6.

TAXONOMIC INVESTIGATIONS

S. A. Rohwer, Entomologist, in Charge

Prof. J. J. Davis, of Purdue University, has recently forwarded to the Museum the type of Agrilus paramasculinus Champlain and Knull. In sending in this type, Professor Davis says in part: "Since I believe that the National Museum is the logical place for types, I am sending this specimen to be deposited in the National Collection."

The Division of Insects has recently received a valuable lot of Porto Rican Coleoptera from George N. Wolcott. The lot included cotypes of five species described by Dr. Guy Marshall, of the British Museum. In transmitting this material Mr. Wolcott expressed the belief that the types of species should be placed in the National Collection, where they will be available to a large number of workers.

On October 26, the Museum received as gifts from E. Rosenberg, Copenhagen, Denmark, specimens of 11 species of reared coleopterous larvae, pupae, and adults, one species, Opatrum riparium Scrib., being new to the collection.

The Museum has recently received a very extensive collection of water beetles belonging to the families Dytiscidae and Haliplidae from John D. Sherman, Jr. This collection contains approximately 20,000 specimens and represents about 400 North American species and about 200 additional exotic species. It includes a few of the types of species described by H. C. Fall and a large number of cotypes and paratypes of species described by this worker. In depositing the collection in the National Museum, Mr. Sherman states that it is given to the Museum in loving appreciation and honor of Dr. E. A. Schwarz, who has done so much to encourage his collecting and to assist him in work on Coleoptera. This collection is in many ways the counterpart of both the Roberts collection of these beetles in the American Museum of Natural History and of the Blanchard collection in the Museum of Comparative Zoology, so that all three institutions now have fairly complete collections of the North American species of these beetles. This collection was brought to Washington in an automobile by H. S. Barber and Mr. Sherman, and arrived in most excellent condition. The transfer of this collection by automobile demonstrates the utility of this method of carrying fragile specimens, which lessens the cost of transportation, inasmuch as it does not necessitate crating and packing.

T. B. Mitchell spent the day of October 1 studying types of bees of the genus Megachile in the Museum collections. Mr. Mitchell was on his way to North Carolina, after spending the summer studying at the Bussey Institution.

Dr. Wm. M. Mann, formerly of the Bureau and now director of the National Zoological Park, was married on October 30 to Miss Lucile H. Quarry, formerly assistant editor in the editorial office of the Bureau.

H. C. Fall, of Tyngsboro, Mass., arrived in Washington October 22 and spent several days here, studying the types of the staphylinid genera Hymenorus and Euaesthetus in the Casey and the Hubbard and Schwarz collections.

John D. Gunder, of California, spent two days of this month at the Museum, taking photographs of western Lepidoptera.

Ernest Bell, of Flushing, N. Y., who has an extensive collection of North American Hesperiidae and is making a special study of this group, spent October 15 and 16 examining the Hesperiidae in the National Collection.

Frank Johnson, of New York, an amateur interested primarily in the moths of the family Saturniidae, spent October 21 comparing specimens with types and other material in the National Collection.

In connection with a trip to New York on annual leave, Dr. Wm. Schaus took occasion to examine the types of Lepidoptera described by Henry Edwards which are housed in the American Museum of Natural History.

While on his vacation in Harrisburg, Pa., early in October, W. S. Fisher used this opportunity to study types of Buprestidae in the collection of Mr. J. Knull, and also obtained information concerning the distribution of species of the genus Agrilus.

Dr. J. R. Schramm, editor of Biological Abstracts, recently visited the Division of Insects and spent a day conferring with various specialists of the Division.

In bidding good-bye to the workers of the Taxonomic Division, Dr. S. Soudek, who left Washington for Czecho-Clovakia on October 30, expressed himself as being delighted with his visit to Washington and the hospitable reception accorded to him by entomologists throughout the entire United States.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS

A. L. Quaintance, Associate Chief of Bureau, in Charge

C. H. Alden, Assistant Entomologist at the Peach Insect Laboratory, Fort Valley, Ga., for more than five years, has resigned to enter commercial work.

O. I. Snapp, in charge of the Bureau's laboratory at Fort Valley, Ga., writes that owing to losses from an over-production of peaches in the season of 1926, Georgia peach growers are materially reducing expenses, and are using less paradichlorobenzene than usual. The tonnage used in the State this year will amount to only about one-fourth of that used in 1925.

E. J. Newcomer, in charge of the Yakima, Wash., station, states that the codling moth prasite Ascogaster carpocapsae, introduced at Yakima in 1920, continues to thrive and increase. Collections of codling moth larvae from banded trees near Yakima in 1926 yielded 3,800 larvae, of which 855, or about 22.5 per cent, were parasitized. This percnetage is higher than has been found before. More than 500 parasitized larvae have been sent to E. P. Venables, Dominion Entomologist at Vernon, B. C., to establish the parasite in the apple-growing regions of British Columbia.

BEE CULTURE INVESTIGATIONS

James I. Hambleton, Apiculturist, in Charge

Dr. A. P. Sturtevant left for Laramie, Wyo., near the end of October to take charge of the new Intermountain Bee Culture Field Station. The primary purpose of this station is to work out problems peculiar to beekeeping practice in the intermountain region. The importance of this region is shown by the fact that the State of Wyoming alone has more car-lot producers of honey than any other State in the Union, with the possible exception of California. Doctor Sturtevant will be assisted in his work by J. E. Eckert, who has been connected with the laboratory at Somerset, Md.

On his visit to Washington early in October, Dr. E. F. Phillips gave an evening lecture for the members of the Bee Culture Laboratory and their families, in which he described his recent trip among the beekeepers of Switzerland, France, England, and Scotland.

Dr. Stepan Soudek visited the Bee Culture Laboratory in October, to see the operation as performed there of packing bees for winter.

In September A. P. Sturtevant spoke before the North Carolina Beekeepers' Association.

LIBRARY

Mabel Colcord, Librarian

NEW BOOKS

Army Medical Bulletin No. 16. Warfare gases: their history, description, medical aspects and after effects. 115 p., illus. U. S. Army Medical Field Service School, Carlisle Barracks, Pa., 1926. (Bibliography, p. 114-115)

Beuhne, F. A.
Bee-keeping in Victoria. Revised and enlarged. 170 p., illus. I. J. Green, Govt. Printer, Melbourne, 1925.

Blanchard, Mrs. Olivia.
Simple instructions for raising silkworms. 11 p. New Orleans, 1924.

Bogen, Emil.
Arachnidism. A study in spider poisoning. Jour. Amer. Med. Assoc., v. 86, No. 25, p. 1894-1896, June 19, 1926.

Chamberlin, W. J.
The Buprestidae of North America exclusive of Mexico. A catalogue including synonymy, bibliography, distribution, type, locality and host of each species. 289 p. Oregon State College, Corvallis, Oreg., 1926. (Lists of authors and titles, p. 245-289.)

Curiosities of entomology. Various pagings. Col. pl. Groombridge and Sons, 1871.

Essig, E. O.
Insects of western North America. 1035 p., illus. The Macmillan Company, N. Y., 1926.

Hearle, Eric.
The mosquitoes of the lower Fraser Valley, British Columbia, and their control. Report of work carried out under the auspices of the National Research Council and the Entomological branch, Department of Agriculture, Ottawa. 94 p., 14 pl. F. A. Acland, Ottawa, 1926. (National Research Council [Canada] Report No. 17.)

Insecta Matsumura v. 1, No. 1. Entomological Museum, Hokkaido Imperial University, Sapporo, Japan, July, 1926.

Jegen, George.
Zur Biologie und Entwicklungsgeschichte einiger Eriophyiden nebst systematischen Bemerkungen. 32 p., 3 pl. Bischofberger & Hotzenkocherle, Chur, 1917.

Lovell, J. H.
Honey plants of North America (north of Mexico). A guide to the best locations for beekeeping in the United States. 408 p., illus. The A. I. Root Company, Medina, Ohio, 1926.

Munro, J. W.
British bark-beetles. 77 p., illus., 10 pl. London, 1926. (Gt. Britain Forestry Commission. Bulletin No. 8.)

Nieschulz, Otto.
Zoologische bijdragen tot het syrraprobleem. IV. Over de ontwikkeling van Tabanus striatus Fabr. Nederlandsch-Indische Bladen voor Diergeneeskunde v. 38, afd. 4, p. 327-347, 2 pl. Aug.,1926. Literatuuroverzicht, p. 345.

Phillips, Mrs. Mary Giesler.
Honey bees and fairy dust. 213 p., illus. McRae Smith Company, Philadelphia, 1926.

Schenk, Emil von.
Der brazilianische Bienenzüchter. 6 Aufl., 245 p., illus., pl. Germano Gundlach and Co., Porto Alegre, 1925.

Stellwaag, F.
Methoden der biologischen Bekampfung Schadlicher Insekten im Pflanzenschutz. Handbuch der biol. Arbeitsmethod. hrsg. Emil Abderhalden. Abt. IX, Teil 1, 2. Hälfte, Heft 3, p. 603-660, illus., Berlin, 1926.

Taiho, Akira.
Investigation of sugar cane beetle Alissonotum crassum Arrow, in Formosa. 52 p., 8 pl. (Formosa, Japan. Dept. of Agr. Government Research Institute Rpt. 18: Jan. 1926.)

U. S. Dept. of Agriculture.
List of technical workers in the Department of Agriculture, 1926. 95 p. Washington, D. C., 1926. (U. S. Dept. Agr. Misc. Circ. No. 73.)

Yamada, Shinichiro.
Medical entomology: a review of the adult anopheline mosquitoes of Japan; systematic descriptions, their habits and their relations to human diseases. Part II. (Tokyo Imperial University. Government Institute of Infectious Diseases. Science Report v. 4, p. 447-493 1925.)

Zander, Enoch.
Der Bau der Biene. 232 p., illus. Eugen Ulmer, Stuttgart, 1922. (Handbuch der Bienenkunde v. 3, ed. 2.)